

BEASL

No

5

1991

BEASL

Bulletin
of the
European Association of Sinological Librarians

No

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Note:

This issue of BEASL has turned back to its original layout since material circumstances have made it necessary to do so. The responsibility for this issue only lies with John Streffer of East-Asian Department, Staatsbibliothek PK in Berlin.

It is primarily devoted to the publication of EASL's recommendations on the automation of cataloguing

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European Association of Sinological Librarians

Recommendations on automated cataloguing of Chinese books

The recommendations will deal with

1. The scope of automated cataloguing of Chinese books
2. The aims of EASL for cooperation in the field of Chinese collections in Europe
3. Technical features: librarianship aspects
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The scope of automated cataloguing.

The automation of the cataloguing of books has been developed over the past twenty years to a degree where large databases today hold millions of records. However, only a very small number of such databases actually hold records that can be taken as full records of Chinese titles, i.e. records containing Chinese characters in their original form.

A record without original script and giving a romanized version only is all but incomprehensible to most readers of the Chinese language. Automated cataloguing of Chinese books as understood by EASL requires that Chinese script can be input and output.

To date, cataloguing of Chinese books in most of western - and far eastern - libraries is done into separate Chinese (or Far-East-language) catalogues. Modern book production in China has led EASL to the conviction that the basic change taking place through automation should also lead to the inclusion of Chinese titles into the general 'western language' catalogues, so as to incorporate the Chinese literature in the proper inventory of all literature.

EASL therefore is of the view that libraries holding Chinese books should endeavour to extend their databases - existing or future - to include Chinese script. The technical requirements in most cases are present.

EASL is furthermore convinced, since holdings of Chinese literature in Europe are so very few, that access to databases containing Chinese records should be available to all interested throughout Europe and not only on a national scale. There is a need to exchange records in order to derive cataloguing from each other thus saving on work in a field where only very limited resources are available.

Various tests in different collections using the two databases available in the USA containing Chinese records (OCLC and RLIN) produced disappointing results. While recognising that these databases do contain very valuable material, EASL has reluctantly come to the conclusion that the cost in labour and in money for most of the European collections is prohibitive.

EASL furthermore holds that especially the internal character coding of both these databases would cut off European databases from all other automated Chinese cataloguing, especially that of China. Though the development of automation in China itself is not yet as advanced as could be hoped, it is however possible that in the near future derived cataloguing will be available from the 'country of origin'.

In summary, EASL hopes by these recommendations to further the common interest of all Chinese collections in Europe by coordinating the effort of each institution on a level where common activities have hitherto been hampered by national interests. The smallness of the community of sinological librarians opens up the prospect that our recommendations can be followed by most of it's members.

The aims of EASL for cooperation

EASL is well aware of the fact that there are as many different needs in automation as there are different Chinese collections. The needs are either due to the size of the collection or to the owner institution, technical features of an existing database or the resources available for the task of automation.

EASL's aim however is to leave options open as far as possible and to avoid imposing requirements which might preclude the cooperation of some institutions.

EASL is well aware that it will be a long process before full cooperation can be operational. However the association can build a basis for cooperation because it has agreed on certain principles of technical requirements for the automation that it's members will use in implementing their individual systems.

The main aim under which all decisions were taken was therefore to keep open the free exchange of data and reduce possible technical obstacles to a minimum. EASL believes that there is no Chinese collection in Europe which

will be able in the near future to incorporate Chinese script into the main western-language database of its library. EASL therefore proposes that records of Chinese titles should continue to be held in separate databases. These records must be structured so that they can be entered into such databases at present in romanized form only. Parts of the records containing Chinese script can be added to romanized records when this becomes technically possible.

Moreover EASL will work towards opening up a datanet for online exchange of Chinese records accessible for Chinese collections of any size. In this way, it hopes to provide data for derived cataloguing by 'buying it in' once only, thus avoiding duplication of costs. X

In view of the fact that most of the collections at present can only afford comparatively small amounts for automation, EASL's recommendation assumes that its execution will happen almost exclusively using personal computers. This assumption can further be justified by the fast development of the technical feasibility of interaction between different disc operating systems allowing for the easy transfer of data from PC to large databases. The PC is perfectly adapted for the offline exchange of data and it already offers enough storage to hold the entire catalogue of even the larger collections in Europe.

Technical features: librarianship aspects

The advantage of the computer for library cataloguing lies in its ability to manipulate data automatically, e.g. sorting, finding and retrieving records or fields in records. This manipulation will however work only when the data is input in a standardized way. To achieve this end EASL has adopted a basic format for Chinese records (including monographs, serials and periodicals).

I General

1. Script to be used
 - a Chinese script in the same way as Roman according to general cataloguing rules for book description wherever data taken from the book is in Chinese
 - b Roman whenever the data is given in Roman
 - c Other scripts not available are to be romanized according to standard (preferably ISO)
2. Romanization of Chinese
 - a Hanyu Pinyin according to ISO standard
 - b The standard dictionary for readings is Xinhua zidian
 - c Word division is to be observed (there is no standard for this so far, the Chinese draft standard of 1988 is considered) X
 - d Syllable division has to be defined in machine readable form using the apostrophe before the initial vowels a/e/o
 - e Family names are to be defined in machine readable form

3. Filing

EASL has not defined filing rules, (e.g. for list, card catalogues), but is convinced that it can only be done by Romanization

II Standard of categories (fields)

EASL has not defined field coding, but recommends that standard categories should be tagged in a systematic way so that easy translation can be achieved

1. Bibliographic description

The fields to be defined here do not necessarily generate entries or have to be indexed. They should contain data 'as taken from the book'. In output they may be - as a matter of convenience for input - be replaced by the content of fields that generate entries and/or are indexed for retrieval.

- a Title proper
- b Subtitle, other title information
- c Parallel title
- d Author statement (statement of responsibility)
- e edition statement
- f place of publication
- g Name of publisher
- h Date of publication
- i Physical description (Umfang)
- j Collective title (Serial)
- k Bibliographical notes

2. Entry generation

The fields to be defined are used both for producing headings in listings (i.e. catalogues) and for searching and retrieval. For the latter purpose, fields are designated to be indexed.

- a Main entries exclusively under title proper
- b Added entries
 - i Parallel title
 - ii Other added titles (Nebensachtitel)
 - iii Uniform title
 - iv Collective title

- v Personal names

vi Corporate Names

3. A limited number of fields has to be reserved for

- a Local information
- b Classification or subject heading

Technical requirements: mechanical, hardware and software

The most basic standard for data exchange of the Chinese characters is the coding of each character with a machine code. There are a number of different codings using combinations of either two or three bytes (ASCII or others). EASL decided to adopt as it's standard the National Standard (Guobiao) of the Peaople's Republic of China. While EASL recognises that the size of the character set is too small at present, we expect that it will soon be expanded to sufficient size. Guobiao uses combinations of 2 bytes with the ASCII coding above 160.



EASL recommends the use of the disc operating system of Micro-Soft (MS/DOS), being the 'IBM standard', and also used in many other brands of PC

To operate a reasonable cataloguing system in conjunction with Chinese the PC must comply with the following requirements:

- Graphics card (for the display of characters on the screen) EGA/VGA
- Hard disc as large as possible (preferably 80 megabyte)
- Ready access memory (RAM) in the range of 2 megabyte and above

As long as the PC uses MS/DOS and has the hardware as described, any hardware can be chosen.

There is a fairly large number of cataloguing systems, which offer as wide a range of different functions as there are different systems. A paramount factor however is their ability to work under the Chinese input system to be chosen. So far only a few have been tested.

EASL recommends that the cataloguing system should offer facilities for

- up to 1000 fields
- variable length fields
- field tags
- automatic indexing of each word in specified fields
- excellent copying and memory devices
- retrieval through indexes



To facilitate the input - and output - of the Chinese script a separate system has to be used with the cataloguing system under which it has to work. As EASL

has decided on the GB-Code, these will be mostly enhanced versions of the Chinese Character Disc Operating System (CCDOS) complying with MS/DOS and the software under which it is to be operated. Besides this, these systems should have enhanced character input methods that are of great importance for daily inputting routine. We envisage the possibility of inputting by full words (or even sentences) in Romanization.

Allegro C: a recommended package

Allegro C is a professional system for cataloguing (and all other fields of library work) designed by a small team of librarians and datatechnicians at the Technical University of Braunschweig headed by B. Eversberg. The team is supported by funds of the German Länder Nordrhein-Westfalen and Niedersachsen.

Allegro C has been tested together with the Chinese input interface 'Shiyong Hanzi Xitong' of Hu Bo in Munich. No adaptation of Allegro C is necessary to operate the two together. The entire software configuration can be acquired at a price of less than DM 700,-

Allegro C has several advantages over similar software:

1. It is - in it's newest version 11.1 - easy to handle when configured. The configuration can be altered in all parts by the design of parameter files, which is possible to any interested operator of the system.
2. The system can be configured for compatability to every other database. The import of records (from LIDOS, LARS, dBase or other) and their export (as lists, cards, to other systems) is achieved through the design of the said parameter files in the same way as the functions like indexing, screen display, format of records that can be altered or newly designed by the informed user.
3. It is possible to index any desirable term (may it be shelf mark, title, personal name or ISBN and publisher etc.) in nine separate indexes using also crossreferences linking them.
4. Installed in a network (like on fileserver Novell Version 3.1) Allegro has been proved to work reliable and fast. In an Allegro database of 130 000 records (at the Univ. Göttingen), it was found, the access time per title is less than for a smaller PC-based database of about 10 000 records.
5. Allegro C is available for PC (under MS/DOS 3.10 or higher) as well as under UNIX. Computer languages fit to work with Allegro C are C and Turbo-C version 2.0

Since it's first appearance in the early eighties Allegro C has been adopted for a broad variety of projects from cataloguing books or special material like manuscripts or maps to compiling bibliographies, invariably as individual user-designed and configured systems. At present it is mainly used in Germany but user interfaces in English are included in each copy of Allegro.

AllChin: Allegro's Chinese offspring

At the meeting this year in Vienna John Streffer of Berlin will demonstrate his completed configuration of Allegro for Chinese cataloguing including card output.

STREFFER, J.M.:

The European Database of Chinese Serials
of the European Association of Sinological Librarians

For this paper I would like to proceed in the following order:

After an initial remark on the Database as it stands today I want to go back to its history, its predecessor and how it came into being, only to come back to the present and some technical problems encountered by a Chinese database in Europe, then however proceed to problems related to Chinese collections in Europe and how they are dealt with in reference to EDoCS and finally to finish off this frugal meal with some remarks on the macroenvironment of European library politics. Even the view of this desert may arouse a somewhat bitter taste.

EDoCS - at least so far - is a tiny database, 5000 records of titles, 10000 locations up to today, hosted however by a fairly large database, the German Serials database 'Zeitschriftendatenbank' ZDB for short. ZDB is a cooperation of German libraries as you may know being located in Berlin catering especially for the needs of the German interlibrary lending system with an importance for that of the first magnitude in that it contains about 600 thousand titles plus their locations, periodicals and newspapers held in mainly scientific or scholarly institutions.

EDoCS as hosted by ZDB has been started in 1988 almost from scratch. There were some records for Chinese titles, however, no expertise on the Chinese language with the then participants of ZDB had resulted in the need to redo them in their entirety. EDoCS is exclusively held in romanization and complies to cataloguing rules based on ISBD, the German Rules for Alphabetic Cataloguing 'RAK'. Some slight modifications and minor redefinitions for Chinese titles had to be introduced, however, it is basic policy to avoid anything requiring special treatment of Chinese records. The input of titles for EDoCS is done in Berlin at the State Library only, so high conformity of records is safeguarded. Locations by now come from Britain, Germany, and Scandinavia, much more are planned to be entered from other countries. Reading access is possible through datanet - though obviously not so frequently used - or by microfiche, which is output every year as EASL/EDoCS on occasion of the yearly meetings of EASL.

The organizational structure of EDoCS consists of three partners, the ZDB -

offering the host, winning expertise - the State Library of the Prussian Cultural Heritage Foundation at Berlin - the housing of and general support for input, winning some fame - and members of EASL - safeguarding the supply of raw material like locations, title information etc carrying off improved knowledge of the scattered sources in their field.

The picture I have drawn may serve as a starter for a view on a project that looks as if still in an infant state. It is really not. It even has a comparatively long history that started back in the late sixties when the Contemporary China Institute at the School of Oriental and African Studies in London won a grant from the German Volkswagenwerk Foundation for the compilation of the voluminous 'Bibliography of Chinese newspapers and periodicals in European libraries'. Containing about 10000 titles it records the holdings of 101 institutions - Chinese titles only - covering all European countries from Italy to Scandinavia, France to the Soviet Union. To collect and compile the material took only a couple of years just a little more than EDoCS is in existence today. Little that I could tell about the working procedure as a frequent user of this valuable tool, however, I view it as earning the highest marks. Nevertheless, though having been pioneering work in that it was one of the early bibliographies in the field, it still had to be done with all the ingredients that are characteristic of numerous listings of Chinese periodicals done since about the fifties: just short titles plus the important information on locations. Title information rarely came - and it has to be said scarcely could come - from autopsy, but relied heavily on printed sources like the excellent 'Quanguo Zhongwen qikan lianhe mulu' Beijing 1961. And it must have been due to pressing time that sources seldom seem to have been checked against each other. Thus there are not a few items where information on the title is obviously contradicted by holdings. In all a bibliographer will understand these shortcomings when he reads in the preface to this work: "It was originally anticipated that this project would take little more than one year."

Referring to contents - and this remark reflects mostly the contents of Chinese collections in Europe - one has to recall that publication in the Mainland China had just recently ceased because of the cultural revolution. Active collections only sporadically had as yet switched to acquisitions coming from this part of the world, Taiwan, so one really could speak about a cutoff date 1966 for this volume, which all too natural extends on the other end back to the beginnings of publication of modern periodicals in China in the late 19th century.

The whole nature of the project for the compilation of this bibliography implied that with it's publication in 1975 it had to stop, though a continuation in the form of a union catalogue might have been a task worth considering. But who would pay for that? And funds, at least resources on which to rely continuously, are needed to undertake such work.

And it took some time and a very different approach to obtain a feasible solution for that problem. At least it's a general experience that a union catalogue has to be instituted permanently and that means it cannot be funded

by a grant that extends over a certain period but will expire. It was this recognition that led the discussion about a proposal introduced by Howard Nelson, then curator of the Chinese collection of British Library, on the first meeting of the then still unfounded European Association of Sinological Librarians in Leiden, the Netherlands, in 1981.

The meeting, having been convened by John Ma (Ma Daren), at the time librarian of the Sinologisch Instituut of the University of Leiden, met under the auspices of the European Association of Chinese Studies which expressly asked the sinological librarians for any proposal worth funding through EACS. Except for a tiny project that was duly finished by John Ma later, the meeting of about 25 colleagues from most European countries, came to the conclusion that unless regular funding could be secured any project would be shortlived and essentially not in line with the actual working of our collections. This included Howard Nelson's proposal for a continuation of the Bibliography of 1975 since it was common understanding - times had changed considerably in this respect over the span from 1970 to 1981 - that such a continuation most certainly had to be done on computer and consequently had to be a permanent undertaking, which wasn't the project EACS was looking for.

The meeting's outcome however wasn't all bleak, the participants resolved to reconvene in future and formed the European Association of Sinological Librarians, so our forthcoming annual meeting, the 11th, is being scheduled for this year in Vienna. Besides other projects Howard Nelson's proposal remained under discussion for some years, the main obstacle for its realization being the lack of a computer powerful enough to host a database the size we envisaged and capable of handling records according to our requirements. This fact certainly wasn't the only controversial point in our continued discussions, but essentially all boiled down to the lack of these prerequisites. It was only in 1985 that we decided to study the possibilities that the German Serials Database ZDB could provide since this database seemed to offer at least a certain amount of features that complied to our intentions. However, it still lacked one of the main criteria we had set, that is, it is not implemented for output of the vernacular, Chinese script. And I may just point to the fact that even today no serious database in Europe at all is implemented with the vernacular.

A very heated debate arose two years later over the issue that the German output format differs though not from ISBD but from let's say AACR2 or cataloguing formats as used in France or elsewhere. ZDB on the other hand couldn't possibly be made to comply to requirements, members of EASL had in mind, we had to take it or leave it. EASL decided to take it since the offer ZDB had to make was generous enough, the host offered itself without charge and was prepared to output the segment of EDoCS on easily obtainable microfiche at almost no cost. This last offer was even more important, as most of the institutions represented by EASL members are too small to afford access to a database like ZDB even by subscribing to its complete microfiche edition done halfyearly.

Nevertheless it was only a further step towards the existence of EDoCS since

the common understanding was only between EASL members to supply information on holdings for input into ZDB's database. At the same time it was understood that input would in the first place lie with members being on the staff of the East Asian Department of Staatsbibliothek in Berlin. The comparatively large Chinese collection there had to be input into ZDB as well thus it could be expected that a fair amount of titles would be done at the expense of Staatsbibliothek, better: such records would make up a considerable nucleus of EDoCS, to which only holdings were to be added. A further supplier of adequate records was to be the collection of the Technical Information Library at the Technical University Hannover, the input of it's holdings to be supervised in Berlin, so that in the first phase of EDoCS an allmost complete set of current periodicals from China, Mainland or Taiwan, would become available to EDoCS at allmost no cost for EASL. It was agreed that there was an identity between members of EASL and members on the staff in Staatsbibliothek Berlin and Technical Information Library at Hannover resulting in a natural identity of interest.

On the basis of these considerations it was possible to reach agreement between EASL and State Library Berlin on the one hand and EASL and ZDB on the other to the understanding, that a selection criterion was introduced into ZDB allocated to EDoCS which is to be entered with every ZDB-record of a Chinese periodical, ZDB would make available the necessary location keys for non-German collections. Input for EDoCS is to be housed at State Library using online terminals of that institution, labour referring exclusively to EDoCS to be done voluntarily by members of EASL, concurrently being on the staff of the East Asian Department of State Library.

It was a very fortunate coincidence that between the State Library and EASL it was common interest that the level of cataloguing should be the highest possible. So the input for 95% of records was possible after a new autopsy at least in part of the respective title. In most cases it was possible to solve the history of publication inclusive of numbering, thus resolving much contradictory information to be found in previous listings and bibliographies.

Since much preparatory work of this kind had be done before the actual start of EDoCS in early 1988, work since then progressed in a satisfactory pace though it must be kept in mind that never more than a single librarian was doing the job. Moreover the numbers of records input per year will decline in proportion to the decline of titles physically present in State Library, because their checking out will rely either on autopsy done outside Berlin or on bibliographic information drawn entirely from secondary sources. So far EDoCS very consciously relied on other members of EASL only for information on holdings, though it will have to much more for title information in the future. The expectation to obtain that in satisfactory quantities - even more so in satisfactory quality - is to be doubted. It is hoped however to attain the number of 10000 records plus 25000 locations by the end of 1995.

So much for the history of EDoCS which wouldn't be worthwhile recording if it weren't for something more: an outline actually of an experiment in the reception of foreign - non-European - culture into my personal, my European

background. It is not on the level of a book written on 'Things Chinese', most certainly not, however in a very practical field that is the integration of professional bibliographic description for Chinese publications into the 'western' language catalogue, our general catalogues.

In other parts of this world it is quite possible that solutions to that problem have been found. In Europe however - and I'm afraid the same applies to many a library I have seen in the Far East or elsewhere - catalogues, even databases are neatly kept apart: there is the 'western language', there the CJK language catalogue. I understand why it is and I think I have to explain at least some of the reasons.

A bibliographic record for a Chinese book (Japanese, Korean, Sino-Annamese and others similar to that) withstands every common procedure in bibliographic handling of books written in non-Roman script. Whereas the book written in Cyrillic or Ethiopian, Arab or Tibetan script can easily be romanized for the record and still be read and interpreted by the informed linguist, no Chinese author can be recognized by his personal name in romanization only. It requires quite some experience to interpret the title of a book from its romanization, more often - it being classical or just the poetic title of a novel - it's entirely impossible. A record without the vernacular, the Chinese character, can not be understood. This then requires linguistic expertise not very common, though growing, in western countries.

On this met two prejudices, the librarian's, who doesn't know Chinese and resents handling such unreadable record, the librarian's, who knows Chinese and loves the seclusion of his exotic collection, not having to bother about complicated rules better left to the ordinary librarian. Even combinations of romanization plus the vernacular didn't lead to compliance with the golden rule: one catalogue for everything saves on time immensely. Good objection there is in our case: who doesn't know he is looking for a Chinese book when he does?

But exactly that happens frequently at least to my experience. The scientist will certainly not note the Chinese title of a journal when there is the English parallel title. His request will be in that language. And I myself got trained the hard way retranslating intermittently the lovely title of 'Threehundred masterpieces in the Palace Museum'. To turn serious: Increasingly Chinese publications present title information in western - mostly the English - language. Split catalogues have not only the tendency not to correspond properly in the way they are intended to but regularly don't at all. And an English title has to be looked up in the western language catalogue, not the Chinese where parallel titles only rarely figure as access points.

These two antagonistic views - separate catalogue or not - frequently cause lively if not ideological discussions. Certainly they too surfaced in the discussions about EDoCS time and again. However there was agreement, that the problem of proper title interpretation wasn't felt as serious with periodicals, since their titles from a linguistic point of view are quite

uniform. On the other hand the point I raised in reference to western language title information was especially important on the part of periodicals.

How much so can be told from an experience in the initial phase of EDoCS when existing records in ZDB had to be revised for EDoCS. A library, specializing in economics and holding a valuable collection of Chinese periodicals in this field, had input about 200 titles without a mark them actually being Chinese. Lack of proper bibliographical proof in some cases made it even impossible to relate entries to strongly suspected 'correct' entries. It was a similar observation I had made in my own library where during the twenties and thirties all Chinese publications carrying a supporting, western language titlepage had been catalogued as if they were western language material. And the same may be observed in connection with a vast number of titles starting or restarting publication after the ten miserable years in PRC in the late seventies/early eighties, only from the opposite side: parallel titles were often given only after a couple of issues had appeared. Careless following up of the history of such titles led to the loss of many of these. Mostly this is a slight loss in the individual case, having some experience, however, as a grass roots librarian with a fairly strong interlibrary traffic, I wouldn't want to account for the hours I spent on following up such cases.

In sum it seems as if the sinological librarian and the 'ordinary' librarian often only meet in their common view: Chinese books for readers of Chinese only. Reality teaches differently and EDoCS tries to remedy such deficiencies.

Further technical problems for EDoCS arose in connection with the integration of chinese records into common cataloguing formality. Though we were lucky enough on the one hand to have to deal with material following closely western publishing use, on the other hand having been forced to do some preparatory thinking on this line these were resolved from the very start. As mentioned earlier, minor adjustments of rules in the German 'Rules for alphabetic cataloguing' couldn't be avoided. To point out just two examples: Fairly often Chinese books carry two entirely parallel titlepages, one 'western', one Chinese. In such cases we had to fall back on the old principle of 'text mainly in this language' to decide on the main title properly. The other: A corporate name 'in the title' or 'to be added to the general title' is decided by grammatical means. For Chinese there is no such grammar. Whatever the graphical situation might be - top left general title, bottom right corporate name - the corporate name is to be included into the title. Conveniently Chinese use for such titles is to have the corporate name always first.

A major challenge for the sinological librarian, however, is posed by the machine, the computer. Traditionally romanization of the Chinese tries to reflect the Chinese character which linguistically is the equivalent of a single syllable. Though the characters in printing or writing are stringed without spacing for words or syllables - traditionally there isn't even a punctuation - romanization couldn't follow in that respect, since it would lead to endless strings of letters that are difficult to grasp. It therefore became common practice to space romanization of the Chinese between syllables and consequently to file not word by word but syllable by syllable. This again

had the advantage of following first the appropriate use of filing characters along their graphics - not their romanization - character by character and second to avoid the need to separate words, which with the Chinese language is an extremely hazardous undertaking. There is no defined concept of the word and recent attempts to introduce some cannot really satisfy the librarians requirements.

Filing romanized records in a card catalogue or a listing thus becomes very easy and it would be difficult to find a doubtful case. Not so with the computer, which will do much more about it, in fact index each syllable on it's own as a separate item. But mind you there is only a limited set of about 400 plus syllables used in romanization. An inverted index for a Chinese database would show only that number of different entries (or words) and no more. Indeed it can still be used by Boolean operation but loses an important function in retrieval: the browse function in that index.

EDoCS then fell back on a German traditional way of handling romanization used since the turn of this century: no spacing at all. For clearer visual interpretation hyphens replace spacings. Since these in German filing always bind and never break, wherever they may be inserted, between syllables or words, the proper sequence will never be doubtful, as only an unbroken string of letters has to be filed. This way of 'implementing' our romanization combines the advantage of eliminating ambiguity in filing plus every facility for the separation of words in order to retain the desirable function of the index. The deficiency, the lack of a satisfactory concept of the word thus loses most of it's weight.

Another problem related to principles of romanization led even deeper into the vexing logic of our ideographic script, which to me is a scriptura franca, a 'free script' as opposed to a lingua franca a 'free language', known to all, like hellenistic Greek. It can be and is used in different tongues, that is entirely unrelated languages like Japanese or Korean, it can be read out in only faintly related dialects like Kantonese or Mandarin without actually disclosing what the phonetics of the original author of a text had been. We have to deal with that when coming across a journal published perhaps in Manchuria in the thirties, the content being multilingual, no Japanese kana used in either title or imprint - is this Japanese or Chinese? How to romanize? All the same applies to the title given in a non-standard romanization in the book. Ways out of such dilemma are many but were is the logical solution that at least would cover most of the cases?

The most promising solution in my view lies in a redefinition for the character of our standard romanization. By the way: the romanization now generally accepted in European collections is Hanyu pinyin. Romanization of the Chinese must be understood not as a representation of a title, a name or anything, but only as a tool whereby to put a Chinese characterstring into an unambiguous sequential order which is unattainable via their original graphics. But at this point we are back to the earlier statement that records for Chinese books depend entirely on the vernacular and this problem will reappear later in a different context. Let it be said here that already a

comparatively small database like EDoCS being based on romanization only includes quite a number of semantically different, phonetically however identical titles.

I will now enter on the 3rd part of this paper, Chinese collections in Europe in relation to EDoCS. Touching this ground I find it the most suitable to draw a small sketch of such collections in general first and then proceed to a more detailed picture of their relationship to a project like ours. Being a friend of abstract models I know perfectly well that I'm generalizing maybe to much but I like to think about Chinese libraries as there being three different strata in Europe, not each of them present in every country, some countries seem even to have no such library at all. Still these 3 strata cover fairly evenly the entire map, a small number of so to speak national collections, a fair number of well established institute libraries and a sizable amount of smaller collections that sometimes acquired their last book years ago. However, the scenery varies from country to country since cultural affairs are and will be a national if not a local matter and libraries mostly fall under this description. In Italy there exists a surprising number of small collections mostly located in Rome, in France almost none outside Paris. In Germany the scene is dominated by University Institute libraries, whereas in Britain four collections may be considered outstanding and only a small number of less important ones exist. Though in Eastern Europe Chinese studies took an upsurge in the fifties a sharp decline later resulted in the situation that almost only in USSR there do exist collections, mainly with institutes of the Academy of Sciences.

But it's not only in size that collections vary it's much more so when it comes to contents. Keep in mind that Chinese culture in a broad sense has to be compared to western culture on the whole. Length of cultural tradition, size of population, the tradition of book making and cultural coherence make sinology, Chinese studies a field which actually could only be compared to an equivalent maybe called 'western studies'. The range reaches from epigraphy to econometrics from loess-studies to history of mathematics. Accordingly each of the European collections has to offer something in a way unique. To point out just a few examples: British Library and it's outstanding fund of old books and manuscripts, rivaled by that of Bibliothèque Nationale at Paris as contrasted by Technical Information Library Hannover consisting exclusively of scientific and technical periodicals. Those libraries built primarily around the scholarly interests of individuals like the one of Needham, author of 'Science and Civilization of China' at Cambridge or Luxun Library at Prag being the child of Jaroslav Prusek critic of modern Chinese literature. Certainly, many of them just reflect trends of sinology others, however, are highly specialised. Contemporary drama and traditional opera make up most of the holdings of Östasiatiska Biblioteket at Stockholm. In sum, none of the European collections can individually compare with let's say Harvard-Yenching or Library of Congress, combined, however, there are 'extraordinary riches' as it is expressed in the preface to EDoCS's predecessor the 'Bibliography of Chinese newspapers and periodicals in European libraries'. EDoCS, in the same way as it's predecessor undertakes to combine these riches further.

During my first visit to Macao I walked the streets and unknowingly entered the invitingly open building of the municipal administration. A sign indicating 'library' made me step selfconsciously inside and I stood in a but for books entirely empty library. No reader, no librarian but stack after stack with books, rare books I knew of but never had seen before. Indeed it was a library without a librarian, a dead library. And indeed some of our European collections are dead collections. It's not because there are no librarians but because of lack of linguistic expertise. And the by far greater deficit lies in the fact, that allmost none of the librarians having that expertise has more than just an experience in doing the job. Very often the library is the responsibility of students earning some extra money who will be replaced by other students after a few years in the most. It's only the major institutions that can afford regular staff mostly a single academic with a background in Chinese who has to look for clerical support.

Thinking under these circumstances of automation - it being much more complicated than in the ordinary European library - is in fact beyond the means available. Thinking of a decentralised online input for EDoCS even in Germany only, where the necessary fascilities are available in about fifty libraries, which could be accessible for staff from at least a few Chinese collections, is only possible under exceptionally favorable circumstances. An attempt to install a ZDB terminal in London would meet with obstacles of which the factor cost would be the least.

But what about decentralised offline input? In this case two options have to be considered: first, input under ZDB format, second, input under local format. The first is hampered by the fact that it would mean to acquire a system that locally isn't compatible. Who would do that just for the limited number of Chinese periodicals? The second implies no cost locally (if and only if a system is available to the staff) but moves the burden of formattranslation to Berlin. There it will lie with the voluntary staff of EDoCS. Even ten participating collections only would mean 10 different programs for translation written by them. Technically it is feasible and it will be attempted in near future for one format. The outcome will show if there is room for more.

We have avaiilable at Berlin the updated database of the holdings of Östasiatiska Bibliotheket at Stockholm. To write a translation program for this shouldn't be all to difficult in case the input data complied to the input format of such data for ZDB, which it does not. Stockholm meticulously lists year by year in a single field in long columns and indicates missing issues within the sequence. For ZDB this has to be translated into a format giving first and last issue and noting missing issues in another field. To automate that translation is quite a challenge. Personally I dont feel competent to do that.

Another obstacle to automated translation and - even to translation by human brain - lies in the different rules for split entries. To stay with Stockholm: the main entry is given under the last main title with crossreference only from previous titles. ZDB will split for each different main title. Holdings

have to be split accordingly.

These facts are not merely due to the lack of expertise on the part of my colleagues as might be gathered from earlier remarks. Mostly they carry on some well planned system, without having to much to bother about the goings on in the profession. The system works, may it be the catalogue, acquisitions etc., mostly it reflects some traditional use in librarianship in our case especially the use in formatting a record, that is national. Even to ask all the collections to comply to ISBD standards is at least at present far beyond the means of EASL. EDoCS has to take this fact for granted.

And EDoCS does take this fact for granted, in the same way as the project for the compilation of the London Bibliography did in the early seventies. It's staff visited the collections copying the information from whatever source there would be, publishing the final result in the end. EDoCS on the other hand has to proceed in a different way since the publication of the result doesn't come in the end, but has been available from the very beginning and hopefully will come out each year. The control given to even the not participating collection will indeed slowly improve the flow of information. It's mostly psychological factors that will work starting off with the notion 'our collection isn't present' and most certainly will lead to much more willingness to cooperate than the colleagues could rely on in the early seventies. It goes without saying that this willingness has to be supported by great flexibility on EDoCS side.

Though up till now EDoCS didn't have to complain about the flow of information sent in voluntarily, in the future it will concentrate on helping collections to supply material and any means suitable will be used.

Finally I would like to turn to a very much different aspect of EDoCS's relation to collections. In the London Bibliography it's exclusively Chinese collections that have been included. EDoCS has widely broadened at least my own view on material present in Europe. Non-Chinese collections that contribute to ZDB are responsible for a considerable percentage of locations included in EDoCS. In the first place these are special collections where the subject matter decided about the acquisition. To name but one: the Senckenberg Museum at Frankfurt/Main, an outstanding library on natural history. Other fields to be mentioned especially are biology, geology, economics. But this remark may just serve as a reminder of the qualities of a union catalogue.

Thus I may now turn to the final part: EDoCS's macroenvironment in European library politics. Basically this should be mentioned since EDoCS has actually been a step outside the secluded world of Chinese collections in the European context.

As a librarian I would never have thought of doing a database in let's assume mathematics or medieval history. Though tempting it may be it's counter the functions of a union catalogue. Classification serves such purpose very well. In the case of Chinese material, however, there is a twofold consideration that makes one feel in a different way: Chinese is not a subject itself, it's

not mathematics or else. And the reverse of the consideration: in the western world it's looked upon as if it were actually a highly specialized subject. Nevertheless I still were inclined to feel there being no need to establish an individual database not even as just a segment within a host like EDoCS. Reasons to be expounded here, however, which lie in the criterion 'European', are to me the only justification for the undertaking.

ZDB as pointed out earlier is a German cooperation and thus quite easy to access in some way for most readers interested in Chinese language literature in Germany. In France and Britain you will find similar catalogues though of a different scope. But Italy and other European countries don't have such tools. For Germany it's in a way my responsibility as member of the staff of the so-called 'national resource' for Chinese books to take care of the problem as a collaborator in ZDB. Even in Britain and France there isn't the situation as favorable as mine. But why duplicate work even in France, Britain, and Germany in a field where labour really is scarce?

In the same way one could plead for a 'world' database, but I think the limits pose themselves in geography and the chance of making use of the efforts of others elsewhere isn't only there but taken. Again from the opposite, a national point, it is to be argued that records from ZDB are difficult to derive for national databases in those other countries. But the chance that such databases would tackle the problem at all was slight.

This together with my conviction that Chinese literature has to be included in the literary universe of our catalogues convinced me of this compromise: to keep Chinese records and locations from the whole of Europe in ZDB although it's only a national database. Still this doesn't yet account for the need of a database in it's own right. The explanation of that lies in one of the practical aspects of EDoCS. Only then it was possible to guarantee the separate output of the Chinese titles on just a few microfiche, which in their turn are the only way of access open to most of the participants.

Another realization that came to me came actually as a surprise: in Europe there is - to our knowledge - no project at all where efforts are combined towards a similar aim. And although my own experience is but little I think cooperation between libraries beyond national boundaries comes almost to nothing. Though there is LIBER and then IFLA, of practical international projects at least I know little. But then, this is nothing of my occupation.

As far as EDoCS is concerned, the only backing it had initially was the members of EASL. Most certainly they had to be interested, since they had conceived the plan. But it was only after the lapse of five years after Howard Nelson's first proposal that EASL found a door where to knock on in serious in order to get the help it needed. Considerations usually ended with the comment: funding only for national projects or: the project can not be institutionalized unless it serves the territorial needs exclusively. It's strange how very international scientific and scholarly cooperation have grown and how little this works with libraries in Europe.

The cooperation between the three partners, ZDB, State Library, and EASL, that finally brought about EDoCS was based primarily on the quiet understanding that the two German institutions could provide only such services that were justified as services in the German interest. Any material contribution - and it was almost only them who could make such contribution - to the project in the first place has to be understood as expenditure in response to a German need. EDoCS had to fit into an existing setup that by mere chance allowed for the European end as well. And I may say until now it has fared well.

Interlibrary lending of literature in Chinese, Japanese and Korean or 'Blauer Leihverkehr'

1. 'Blauer Leihverkehr' - what is it?

It is a special service for institutes of East-Asian studies whereby material is supplied by the East-Asian Department of the Staatsbibliothek Preußischer Kulturbesitz, Potsdamer Straße 33, 1000 Berlin 30. The East-Asian Department Of the Staatsbibliothek in Berlin is involved in the co-operative acquisition programme of the Deutsche Forschungsgemeinschaft.

2. Who can use it?

Everybody who is attached to an institute of East-Asian studies (students, teachers ...)

3 How to participate in it?

The head of the institute has to sign a contract between the institute and the East-Asian Department of the Staatsbibliothek in Berlin. The institute must accept the guidelines for interlending. Thereafter the institute will be supplied with request forms coloured blue - hence its name 'Blauer Leihverkehr'

4. How to use it?

Fill in the request form and send it to the East-Asian department of the Staatsbibliothek in Berlin. Book and copies will be sent directly to your institute free of charge (but there is a charge for copies of more than 20 pages).

After use the material has to be sent back by the institute directly to the East-Asian Department of Staatsbibliothek

5. How to make the best use of it?

Fill in the request forms by checking the locations first and writing down the shelf mark (Signatur). It will be easier for us and quicker for you.

For checking the location:

- 1) Monographies (in Chinese, Japanese, Korean)
Staatsbibliothek Preußischer Kulturbesitz, Berlin:
Katalog der Ostasienabteilung / hrsg. v. Rainer Krempien. -
Osnabrück : Biblio, 1984. - 18 Bde - pro Band DM 450,-
- 2) Periodicals
Zeitschriftendatenbank / Deutsches Bibliotheksinstitut ;
Staatsbibliothek Preußischer Kulturbesitz. - Wiesbaden :
Harrassowitz Gesamtausdruck Jan. 1991 (318 Microfiches)

That's it - 'Blauer Leihverkehr', a special service for literature in Chinese,
Japanese and Korean

Claudia Lux, Berlin

THE DEVELOPMENT OF
THE CHINESE BIBLIOGRAPHICAL AUTOMATION IN CHINA

by CHENG Zhen

In 1991, in its Bulletin No.5, EASL published the "Recommendations on automated cataloguing of Chinese books" to further the co-ordination in the field of non-Romanized cataloguing of Chinese collection in Europe. The main aim of EASL for co-operation was to keep open the free exchange of data, reduce possible technical obstacles to a minimum and avoid some of the unnecessary duplications. To build a basis for corporation, EASL decided to adopt GB Chinese character code system as its most basic standard for data exchange of the Chinese characters. The reason is that the main part of the Chinese collections in Europe have been and will be obtained from mainland China, the "country of origin", so will the catalogue data.

Though the development of automatic bibliography in China itself is not yet as advanced as could be hoped, it has indeed made a great progress in the past decade.

Any successful computerised Chinese bibliographical system should consist of three parts of work: a) processing system of Chinese character, b) Chinese MARC data, and c) application software system. China has made great strides forward in all these three fields, while European Chinese Librarians are making every endeavour to find a solution for the automatic bibliography of their Chinese collections.

This paper aims to offer some information, which, I hope, will be of help to European colleagues for their making decision in choosing their way towards the automation of Chinese collections.

1. The Processing System of Chinese Character

The computer processing of Chinese character has long been the fundamental hurdle to automatic bibliography of Chinese collections. To make computer processing of Chinese character possible, a great deal of efforts have been poured to this tough task. Nowadays, several different code systems have been used by various databases in different countries and areas. But these databases would be cut off from each other by using different code system.

Considering the needs of exchanging records among European Chinese libraries and deriving automated catalogue from mainland China, EASL has decided to adopt GB system as its basic standard.

Actually, since the publishing of GB code of Chinese character primary set in 1981, China has made a great progress.

1.1 GB Code of Chinese Character Set

On May 1st, 1981, the "Code of Chinese Graphic Character Set for Information Interchange (Primary Set) GB 2312-80" was published in China. Only 6,763 Chinese characters were included in this primary set, due to the consideration of helping reduce the cost of setting up a Chinese character processing system, so as to popularise the use of computer in China. It is wise that

I hope,
revision

The number of Chinese characters in Primary Set had been controlled in this level while only very limited memory were available in a microcomputer. According to the statistics of a Chinese character usage frequency survey conducted in 1975, the coverage rate in terms of the use of the six thousand seven hundred or more characters of the Primary Set was over 99.99%. Obviously, the 6,763 Chinese characters collected in Primary Set is insufficient for cataloguing Chinese collections in Chinese Libraries.

To meet both the needs for those users who use more characters than those in the primary set and the needs of the areas where the traditional form of Chinese characters are used, 5 Supplement Sets had been published since 1984(?). The amount of the characters collected in each set are shown below:

Primary Set	(GB 2312-80)	6,763	Simplified form
Supplementary Set 1	(GB 12345-90)	6,866	Traditional form
Supplementary Set 2	(GB 7589-87)	7,237	Simplified form
Supplementary Set 3	(GB 13000 ?)	7,237	Traditional form
Supplementary Set 4	(GB 7590-87)	7,039	Simplified form
Supplementary Set 5	(GB 13000-?)	7,039	Traditional form

After the publishing of these 5 sets, GB set family has collection of 42,181 Chinese characters in total. Among them some characters have both simplified form and traditional complex form, after reducing the duplication between these two forms, there are about 28,000 independent Chinese characters, which is quite enough for library cataloguing of Chinese books. Most of these characters are rarely used or occasionally used characters.

1.2 Electronic Dictionary of Chinese Character Attribute

Electronic Dictionary of Chinese Character Attribute is another very important facility for automatic cataloguing of Chinese collections and Chinese information processing. In 1985 the Database of Chinese Character Attribute had been developed by the National Library of China (NLC), which included 25 attributes of 6,763 Chinese characters in the Primary Set. Based on this database, the Electronic Dictionary of Chinese Character Attribute was built in 1990. In which more than 40,000 Chinese characters in the 6 character sets were involved. Supported by a software system, this electronic dictionary possesses following basic functions:

A) **Chinese Character Sorting** Considering that several authoritative rules for sorting Chinese character are widely used in word processing, this dictionary enables computer based Chinese information processing system to arrange Chinese characters in a) component and radical order, b) Chinese Pinyin order, c) stroke number and stroke form order, and d) four-corner order.

B) **Phonetic Conversion** This system implement automatic conversion between Chinese character and its phonetic transcription, so that it can meet the needs of Romanized Chinese catalogue database for overseas users. That will save the cost in indexing, imputing, checking and updating pinyin

data, which is always subject to error.

With the help of this function, the romanized catalogue data have been created automatically in the Chinese MARC published by NLC.

c) **Variant Form Connection** As a matter of fact, simplified form, traditional complex form and variant form of Chinese characters are now all in use in different areas, (mainland China, Taiwan, Hong Kong) and different countries. In order to enhance the completeness of retrieval system, namely, information can be obtained whether using simplified form or tradition form or variant form, this function offers the information for linking up the simplified form to its traditional and variant form.

d) **Code Conversion** For the sake of exchanging Chinese information among computer systems which adopt different Chinese character code sets, this function builds a relationship between GB code system and CCCII code system, thus makes it possible to use ~~the~~ CCCII-based MARC data in a GB-based computer system.

e) **Other Applications** Because this dictionary offers various attributes of Chinese characters' form, phonetic and code, it facilitates the research in the characteristics and the pattern of Chinese character.

This system is applicable in maxicomputers, medium computers, minicomputers and microcomputers as well. Since 1986, this attribute Dictionary and the software have been widely used by hundred domestic users. In 1990, the project of research on the Chinese Character Attribute System^{was} rewarded the winner of the

National Science and Technology Progress Prize.

1.3 Multi-language Processing

Since most libraries have their collections in more than one language, we have to keep an eye on the automatic processing of multi-language and multi-script materials, while we try to find the solution to the processing of Chinese information.

Nowadays, a software package has been developed by NLC in its NEC ACOS mainframe, with the capability of processing of Chinese, Japanese, "western language"(Latin family) and Russian. The multiplanar-invoking technique will be used to call different character set when necessary. But this is by no means the final solution of multi-language processing.

To meet the challenge of multi-language environment, many multi-language processing systems (such as CJK) have been used in different areas and different countries. Though these systems have ability to processing more than one language in some degree, the use of different character code system makes exchanging data difficult, if not impossible, between different systems.

In view of the fact that what we have to face today is not only the challenge of multi-language, but also the challenge of multi-code-system, International Standard Organisation has issued a standard document-- ISO 10646, to set up a universal language character set. In the CJK section of this character set, 20902 Chinese characters are involved, of which about 600 characters are those that only used in Japanese and 50 in Korean, the others are common used and/or Chinese used Chinese characters. 1,000 characters in English, Latin, Cyrillic, Greek, Arabic and so on,

e also involved.

Based on this standard, some US computer companies have started developing new generation computer system specially for the use of cataloguing multi-language materials in libraries. It is expected that new computer system will be commercially available in one or two years. That will lead to the final solution of multi-language processing and also the final solution of Chinese information exchange in different database.

2. Chinese MARC

2.1 Chinese MARC Format

The National Library of China launched out into its plan of library automation, which is bibliographic-based and Chinese-oriented, as early as 1975, while the whole country was still in the chaos of "Culture Revolution". In 1980, NLC introduced LC MARC and built a simulation system with the function of database creation, data retrieval and so on. Based on a series of research works, NLC began its project of developing Chinese MARC (CNMARC). In December 1986, after researching into the experiences of automatic cataloguing in other libraries in the world, the Automation Department of NLC drafted the Chinese MARC Format. In 1989, this draft format was revised according to the newly published UNIMARC, and the first edition of the Chinese MARC Format was officially published at last in 1990.

Based on a series of international standards as well as national standards, this document stipulates the tag, indicator and subfield identifier of a catalogue record, and also stipulate

the logical and physical formats with which the catalogue records are recorded in tape, disk or other media, and the format of its content designator. The main feature of this MARC format is the followings:

- a) Complying with the designing principles of UNIMARC and international standards concerned, it is well applicable in international exchanges of catalogue data.
- b) Considering the distinguishing feature of Chinese cataloguing data and the processing of Chinese character, this format adds certain fields, sub-fields and content designators to meet the needs in cataloguing Chinese collections.
- c) Referring to the international standards, this format stipulates the identifiers for different character sets and the rule for switching^t between character sets, so that it can meet the needs while the characters in different set appear in the cataloguing data, or one-byte characters and two or three byte characters appearing alternatively.

Conforming to Chinese MARC format, NLC had catalogued the Chinese books published in mainland China since 1988, and put its MARC data on sale domestically in 1990. (The export of CNMARC data to overseas countries was approved by the Ministry of Culture one year later.)

2.2 Chinese MARC Data Centre And Its MARC Products

Aimed at making CNMARC products commercially available to libraries home and abroad, Chinese MARC Data Centre was set up in January 1991, under the New Technology Development Co. of the NLC. To integrate the producing and selling CNMARC products, the

former Chinese Cataloguing Department of NLC was put under the Centre. Now there are four departments under this centre including Data Collection Dept., Cataloguing Dept., Technical Development Dept. and Issuing Dept., with about 60 professional staffs.

The main products of Chinese MARC Data Centre are as followed:

. **Chinese MARC** Issued every two weeks with 1,200 records in each issue, the CNMARC covers 80% of the new books published in mainland China, and is almost synchronised with the distribution of new books (delayed time is less than half a month). Now up to 100,000 MARC records of the books published since 1988 are available in NLC's Chinese bibliography database.

Further action will be taken to improve the coverage ratio and promptness of MARC data. MARC Centre has reached an agreement with Xinhua Book Store for collaborating on the plan of Cataloguing In Print (CIP) .

. **Catalogue of Current Chinese Serials** This catalogue is a part of CNMARC, updating over 10,000 titles of newspapers and periodicals published from 1988 to 1991 in mainland China, Taiwan, Hong Kong, Macao, and several Chinese newspapers published overseas.

. **Chinese Character Attribute System** See Paragraph 1.2 for detail.

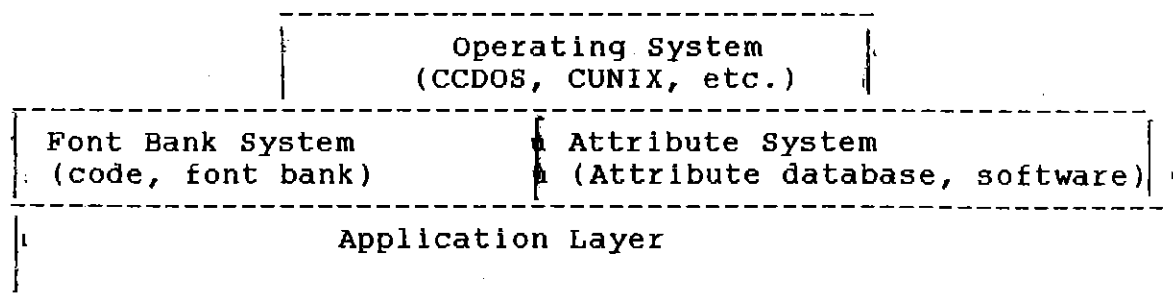
. **Library Micro-computer Management System** This is a microcomputer-based software package, catering to the needs of medium and small libraries, see Paragraph 3 for detail.

. **Chinese Bibliography Authorities Database** Established on the basis of CNMARC format, the Authorities Database contains

personal author, family author, group author, conference, geographical name, uniform title, series title and subject. As a part of this database, the Authorities File of Ancient Chinese Authors are now under compilation, which contains over 40,000 personal and group authors from ancient times to the period of Republic of China(1911).

3. Application Software System

Generally speaking, a Chinese computer software system can be divided into three layers as shown in the figure bellow. At the top is the operating system (such as CCDOS); under this layer is the Chinese character font bank system (including code and dot-matrix font bank); correspondent to font bank system, the Chinese Character Attribute System is installed in the same layer to support the computer processing of Chinese character; Under this layer is the application layer, where various kind of computer programming languages, application programmes or application software package are installed.



NLC is now developing a comprehensive management software package at its NEC ACOS-603 maxicomputer system. The main part of the software package, including acquisition, cataloguing,

retrieval, authority control, etc., have gone into operation.

At the same time, Chinese MARC Centre has developed a microcomputer library management system, catering to medium and small libraries. This software package contains acquisition, cataloguing, retrieval, product output, database maintenance, circulating and serials management sub-system, and can be run in IBM microcomputers(286 or over) or its compatibles.

This system allows users to select catalogue data from CNMARC and send them to users' database directly. The retrieval sub-system provides 7 access points, among which 4 access points allow logical retrieval. The output sub-system is applicable for printing new books bulletin, catalogue cards, bibliographical monograph or catalogue of collections.

This microcomputer-based system is designed in accordance with the situations of most local public libraries in China. The advantages is that no programming work is needed so as to save the users' work in programming which is difficult to most librarians. The disadvantage is, therefore, the lack of flexibility.

4. Suggestion

The endeavours that China have made in the field of Chinese bibliographic automation, as mentioned above, are a part of a world-wide effort. As a 'country of origin', China plays an important role in this world-wide effort. China's achievements in processing of Chinese character, research on Chinese character attribute, producing Chinese MARC data and so on, have provided a fundamental condition for the Chinese bibliographical automation.

Chinese libraries both at home and overseas will benefit from these fruits in their automation. Unfortunately, China has paid such a few attention to communication with overseas Chinese libraries in the field of automation, that less has been known by his overseas colleagues about what China has achieved in these years. China MARC Centre of NLC is now looking for overseas partners to promote the spread of Chinese MARC over the world. Obviously, for European Chinese libraries, obtaining MARC data from China will save their works in cataloguing and inputting data. The communication and cooperation with China is therefore important for exchange of information and ideas, and derive proper MARC product from China.

My suggestion in this stage is that EASL establish a closer relation with Chinese MARC Centre on the basis of common interest.

Before proper cooperative action can be taken, we may need a reliable channel for regular communication, so that EASL can obtain information about progress in China and the required documents and materials issued by NLC about CNMARC. On the other hand, Chinese MARC Data Centre can learn more about the needs of European Chinese Libraries and the environment for automation of Chinese catalogue in Europe. Through this channel, China will exchange information and ideas with not only individual library, but also European Chinese libraries as a whole.

Though NLC has established cooperative relations with some libraries, the further cooperation between the European Chinese libraries and Chinese MARC Centre should be conceived on a European scale. As what Mr. Howard Nelson, librarian of British

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Library Reference Division, had mentioned 10 years ago in his paper entitled 'Chinese Catalogue Automation in the UK: And in Europe?', 'If progress is to be made at all, it should probably now be conceived on a European scale, no longer on the basis of a single country - let alone a single library.'

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